

## STATEMENT OF CONSIDERATIONS

### REQUEST BY SIEMENS WESTINGHOUSE POWER CORP. FOR AN ADVANCE WAIVER OF DOMESTIC AND FOREIGN INVENTION RIGHTS UNDER DOE COOPERATIVE AGREEMENT NO. DE-FC26-03NT41891; W(A)-04-013, CH-1183

The Petitioner, Siemens Westinghouse Power Corporation, (Siemens) was awarded this cooperative agreement for the performance of work entitled, "Catalytic Combustion for Fuel Flexible Turbines." The purpose of the cooperative agreement is to develop and demonstrate a cost effective, fuel flexible (syngas/natural gas) catalytic combustor that will achieve 2 ppm NOx emissions at the gas turbine exit and meet all other engine operational requirements. To meet the goals of High Efficiency Engines and Turbines (HEET), this program will develop an ultra-low-NOx catalytic combustor to burn coal-derived synthesis gas (syngas) and natural gas in existing and advanced gas turbines for IGCC and Vision 21 program goals. The combustion system will be capable of retrofit into industrial gas turbine engines as well as applied and deployed in new, advanced gas turbines. The emission's goal will be accomplished without the use of conventional backend catalytic reduction technology. Further details of the scope of this effort are provided in response to question 2 of the waiver petition.

The total estimated cost of the cooperative agreement is \$6,646,183, with the DOE share being \$5,316,946, or 80%, while the remaining cost share of 20%, or \$1,329,237, will be provided by Siemens. The period of performance is from October 2003 through September 2006.

In its response to questions 4 and 5 of the attached waiver petition, Siemens has described its technical competence in the field of high performance gas turbine engines and combustion systems. Siemens has over 120GW of installed gas turbine power generation worldwide. It has developed gas turbine combustion systems that are capable of single digit NOx emissions. An extensive patent portfolio is representative of Siemens' competencies in this area, and a listing of U.S. patents for gas turbine systems and components, including patents specifically related to catalytic combustion, is attached to the waiver petition as exhibit 1. Siemens is a manufacturer of electrical power generation equipment, and a service provider to this equipment. Siemens Westinghouse turbine generator equipment represents 33 percent of the installed base in the U.S. Siemens' response demonstrates its technical competency in the field of high performance gas turbine engines and combustion systems.

In its response to questions 8 and 9 of the attached waiver petition, Siemens states that grant of the waiver request will result in the rapid commercialization of fuel flexible catalytic combustion technology that will significantly improve plant emissions and broaden application to coal based fuels. The waiver will provide Siemens with the incentive to further invest, develop and market a fuel flexible catalytic combustor. With respect to competition, Siemens states that it competes in the global marketplace with other global companies that have the potential to and continue to develop advanced, ultra low emission combustors for gas turbine application. General Electric, Alstom, and MHI all produce gas turbines with similar components. Siemens anticipates these competitors will develop similar technologies in response to the market drivers for a fuel flexible, ultra low NOx combustion system. Thus grant of the waiver will not place Siemens in a preferred position: it will allow it to remain competitive in a global marketplace, and therefore have a positive effect on competition and market concentration.

The subject cooperative agreement will be modified to add the Patent Rights--Waiver clause in conformance with 10 CFR 784.12, wherein Siemens has agreed to the provisions of 35 U.S.C §§ 202, 203, and 204. This waiver clause will also include a paragraph entitled U.S.



Competitiveness, in which Siemens agrees to substantial U. S. manufacture of subject inventions (attached hereto). Additionally, Siemens agrees not to transfer subject inventions to any other entity unless that other entity agrees to these same requirements. The petitioner has further agreed to modification of the data clause of the subject cooperative agreement (48 C.F.R. 952.227-14) by adding paragraph (k), Alternative VI, concerning contractor licensing of data

Considering the foregoing, it is believed that granting the waiver will provide the Petitioner with the necessary incentive to invest resources in the commercialization of the results of the agreement in a fashion which will make the agreement's benefits available to the public in the shortest practicable time. In addition, it would appear that grant of the above requested waiver would not result in an adverse effect on competition nor result in excessive market concentration. Therefore, in view of the objectives and considerations set forth in 10 CFR 784, all of which have been considered, it is recommended that the requested waiver, as set forth above, be granted.

Mark P. Dvorscak

Mark P. Dvorscak  
Assistant Chief Counsel  
Intellectual Property Law Division

Date : March 5, 2004

Based on the foregoing Statement of Considerations and the representations in the attached waiver petition, it is determined that the United States and the general public will best be served by a waiver of rights of the scope described above, and therefore the waiver is granted. This waiver shall not apply to any modification or extension of this agreement, where through such modification or extension, the purpose, scope, or cost of the agreement is substantially altered.

CONCURRENCE:

George Rudins

George Rudins  
Deputy Assistant Secretary  
Office of Fossil Energy  
Coal and Power Systems

Date: 4/30/04

APPROVAL:

Paul A. Gottlieb  
Paul A. Gottlieb  
Assistant General Counsel  
for Technology Transfer and  
Intellectual Property

Date: 5-7-04

(t) U. S. COMPETITIVENESS The Contractor agrees that any products embodying any waived invention or produced through the use of any waived invention will be manufactured substantially in the United States unless the Contractor can show to the satisfaction of the DOE that it is not commercially feasible to do so. In the event the DOE agrees to foreign manufacture, there will be a requirement that the Government's support of the technology be recognized in some appropriate manner, e.g., recoupment of the Government's investment, etc. The Contractor agrees that it will not license, assign or otherwise transfer any waived invention to any entity unless that entity agrees to these same requirements. Should the Contractor or other such entity receiving rights in the invention undergo a change in ownership amounting to a controlling interest, then the waiver, assignment, license, or other transfer of rights in the waived invention is suspended until approved in writing by the DOE.